

TITLE

GENES ENCODING CAROTENOID COMPOUNDS

ABSTRACT OF THE DISCLOSURE

Genes have been isolated from strain DC260, a member of the
5 *Enterobacteriaceae* family, encoding geranylgeranyl pyrophosphate
(GGPP) synthetase (CrtE), phytoene synthase (CrtB), phytoene
desaturase (CrtI), lycopene cyclase (CrtY), β -carotene hydroxylase (CrtZ),
and zeaxanthin glucosyl transferase (CrtX) activity. The genes and their
products are useful for the conversion of farnesyl pyrophosphate to
10 carotenoids. Vectors containing those DNA segments, host cells
containing the vectors and methods for producing those enzymes by
recombinant DNA technology in transformed host organisms are
disclosed.

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